

CLAIMS

1. A liquid soap dispenser for mating with a liquid soap reservoir, said reservoir having an elongated soap dispensing tube extending from the reservoir, and a pump for pumping liquid soap through the soap dispensing tube, said liquid soap dispenser comprising:

a housing with a base end and a spout end;

a shank for engaging the housing and for securing the base end of the housing to a surface;

a soap path retainer disposed in said housing, said soap path retainer having a generally cylindrical passageway extending from near the base end of the housing to the spout end;

a shank adapter disposed in said shank, said shank adapter having a generally cylindrical passageway defined therethrough, said shank adapter having a bottom end for securing the liquid soap reservoir to the soap dispenser;

said passageway in the shank adapter and the passageway in the soap path retainer in general alignment to receive the elongated soap dispensing tube therein; and

a sensor for detecting the presence of a user near the soap dispenser and for sending signals to activate the pump to supply liquid soap through the soap dispensing tube upon detecting the presence of a user.

2. The liquid soap dispenser as claimed in accordance with claim 1, said passageway in the soap path retainer is curved through more than 90 degrees.

3. The liquid soap dispenser as claimed in accordance with claim 2, wherein the passageway in the soap path retainer is curved in the approximate range of 120 to 150 degrees.

4. The liquid soap dispenser as claimed in accordance with claim 1, wherein said soap path retainer further comprises two complementary halves that are mated together.

5. The liquid soap dispenser as claimed in accordance with claim 4, wherein the two complementary halves of the soap path retainer are formed from plastic.

6. The liquid soap dispenser as claimed in accordance with claim 1, wherein said soap path retainer further comprises a sensor base and a sensor housing for containing the sensor therein, said sensor housing secured to the sensor base of the soap path retainer.

7. The liquid soap dispenser as claimed in accordance with claim 1, wherein said housing is generally curved from the base end to the spout end.

8. The liquid soap dispenser as claimed in accordance with claim 1, wherein said housing has an open front surface and a face plate for covering the open front surface and for providing access to the interior of said housing.

9. The liquid soap dispenser as claimed in accordance with claim 8, wherein said face plate has a window for said sensor.

10. The liquid soap dispenser as claimed in accordance with claim 1, wherein said soap path retainer has a base portion with an aperture, said liquid soap

dispenser further comprising locking means disposed in said aperture for securing a top end of the shank adapter to the soap path retainer.

11. A liquid soap dispenser for mating with a liquid soap reservoir, said reservoir having an elongated soap dispensing tube extending from the reservoir, and a pump for pumping liquid soap through the soap dispensing tube, said liquid soap dispenser comprising:

a housing with a base end and a spout end;

a shank for engaging the housing and for securing the base end of the housing to a surface;

a soap path retainer disposed in said housing, said soap path retainer having a generally cylindrical passageway extending from near the base end of the housing to the spout end;

a shank adapter disposed in said shank, said shank adapter having a generally cylindrical passageway defined therethrough, said shank adapter having a bottom end for securing the liquid soap reservoir to the soap dispenser;

said passageway in the shank adapter and the passageway in the soap path retainer in general alignment to receive the elongated soap dispensing tube therein;

a liquid soap reservoir with an elongated soap dispensing tube extending from the reservoir; said elongated soap dispensing tube disposed in and through the passageway in the shank adapter and the passageway in the soap path retainer;

a pump for pumping liquid soap from the reservoir through the elongated soap dispensing tube; and

a sensor for detecting the presence of a user near the soap dispenser and for sending signals to activate the pump to supply liquid soap through the soap dispensing tube upon detecting the presence of a user.

12. The liquid soap dispenser as claimed in accordance with claim 11, said passageway in the soap path retainer is curved through more than 90 degrees.

13. The liquid soap dispenser as claimed in accordance with claim 12, wherein the passageway in the soap path retainer is curved in the approximate range of 120 to 150 degrees.

14. The liquid soap dispenser as claimed in accordance with claim 11, wherein said soap path retainer further comprises two complementary halves that are secured together.

15. The liquid soap dispenser as claimed in accordance with claim 14, wherein the two complementary halves of the soap path retainer are formed from plastic.

16. The liquid soap dispenser as claimed in accordance with claim 11, wherein said soap path retainer further comprises a base portion and a sensor housing for containing the sensor therein, said sensor housing secured to the base portion of the soap path retainer.

17. The liquid soap dispenser as claimed in accordance with claim 11, wherein said housing is generally curved from the base end to the spout end.

18. The liquid soap dispenser as claimed in accordance with claim 11, wherein said housing has an open front surface and a face plate for covering the open

front surface and for providing access to the interior of said housing.

19. The liquid soap dispenser as claimed in accordance with claim 18, wherein said face plate has a window for said sensor.

20. The liquid soap dispenser as claimed in accordance with claim 11, wherein said soap path retainer has a base portion with an aperture, said liquid soap dispenser further comprising locking means disposed in said aperture for securing a top end of the shank adapter to the soap path retainer.